



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,311	09/30/2003	Patrick S. Clare	03RE145/YOD REEL:0051	5339

7590 04/14/2006

Alexander M. Gerasimow
Allen-Bradley Company, LLC
1201 South Second Street
Milwaukee, WI 53204-2496

EXAMINER

JOYCE, WILLIAM C

ART UNIT	PAPER NUMBER
----------	--------------

3682

DATE MAILED: 04/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/675,311	Applicant(s) CLARE ET AL.	
	Examiner William C. Joyce	Art Unit 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

This is the First Office Action in response to the above identified patent application filed on September 30, 2003.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-10, 12-22, 24-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Minegishi et al. (US Patent 6,485,394).

Figures 6 and 8 of Minegishi et al. illustrates a gearbox comprising: a gearbox input shaft supporting a bevel gear (90A,122A), a gearbox output shaft (102,126), the gearbox output shaft being oriented transverse to the gearbox input shaft; and a motor mounting portion (62) enabling a motor (2) having a motor output shaft to be secured to the gearbox, the motor output shaft being aligned with the gearbox input shaft when the motor is secured to the motor mounting portion, a planetary arrangement (36) being disposed between the motor shaft and the gearbox input shaft for drivingly coupling the shafts together for rotation. As understood from the figures, the output shaft is constructed such that it could support the gearbox.

With respect to claims 6, 13, and 20, the input gear of Figure 6 is a hypoid pinion, wherein a hypoid pinion is a spiral bevel gear.

With respect to claims 26-28, Minegishi et al. illustrates in Figure 8 a first housing portion disposed about the input and output gears, and a second housing positioned at a bottom portion of the first housing portion.

3. Claims 1-5, 7-12, 14-19, 21, 22, 24, 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Eichinger (US Patent 4,148,262).

Figure 6 of Eichinger illustrates a gearbox comprising: a gearbox input shaft (29) supporting a bevel gear (30), a gearbox hollow output shaft (35), the gearbox output shaft being oriented transverse to the gearbox input shaft; and a motor mounting portion enabling a motor (1) having a motor output shaft to be secured to the gearbox, the motor output shaft being aligned with the gearbox input shaft when the motor is secured to the motor mounting portion, a coupling arrangement (10) being disposed between the motor shaft and the gearbox input shaft for drivingly coupling the shafts together for rotation. As understood from the figures, the output shaft is constructed such that it could support the gearbox.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 3682

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6, 13, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eichinger (US Patent 4,148,262) as applied to claims 1-5, 7-12, 14-19, 21, 22, 24, 25 above.

Eichinger does not teach the bevel gears as spiral bevel gears, however it was well known in the art to form a bevel gear with spiral teeth. Official Notice is taken with respect to forming the bevel gear of Eichinger with spiral teeth since it was well known in the art for producing a smooth operating gear device having an increased operating capacity.

6. Claims 10, 23, and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over at least one of Minegishi et al. (US Patent 6,485,394) or Eichinger (US Patent 4,148,262) in view of Antony et al. (US Patent 5,857,389).

In the event applicant further defines the gearbox as "only" being supported by the shaft, claim 10 would be rejected as described below.

Claims 23 and 29-32 are rejected as described below.

The transverse gearbox disclosed by either Minegishi et al. or Eichinger does not teach the claimed supporting means for supporting the gearbox. The prior art to Antony et al. discloses (column 1, lines 34+) "torque arms are widely used with drive units having hollow bore output shafts where the solid shaft of the driven machinery is inserted into the bore of the driving unit" and "this type of drive arrangement (also called "shaft mounted gearboxes or gearmotors) secures inherently the alignment of the driven

Art Unit: 3682

and drive shafts.” It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the supporting means of either Minegishi et al. or Eichinger with a solid driven shaft extending through a hollow output shaft in combination with a torque arm supporting the gearbox, as taught by Antony, motivation being to secure the alignment of the device.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note the transverse gearbox of Ruppert, Jr. et al. ('504), Mensing et al. ('117), Minegishi et al. ('231), and Nagai et al. ('639). Note the tie-rod of Antony et al. ('116).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Joyce whose telephone number is (571) 272-7107. The examiner can normally be reached on Monday - Thursday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3682

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 4/12/06
William C. Joyce